Patent claims

1. Enzyme,
characterized in that it has uracil-DNA glycosylase activity and is completely inactivated when heated above about 60°C.

2. Enzyme according to claim 1,
characterized in that it has an amino acid sequence as shown in SEQ.ID.NO: 1 or SEQ.ID.NO : 2 or a functional part thereof.

3. Enzyme according to claim 1 ~~or 2~~,
characterized in that it is derived from an organism adapted to a cold environment.

4. Enzyme according to claim 1 ~~any of the preceding claims~~,
characterized in that it is derived from an eukaryotic organism, preferably from Atlantic cod (*Gadus morhua*).

5. Enzyme according to claim 1 ~~any of the preceding claims~~,
characterized in that it comprises a traceable label.

6. DNA sequence,
characterized in that it encodes the enzyme according to claim 1 ~~any of the claims 1—5~~.

7. DNA sequence,
characterized in that it comprises the nucleotide sequence given in SEQ. ID. NO : 1 and/or SEQ. ID. NO : 2.

8. DNA sequence according to claim 6 ~~or 7~~,
characterized in that it includes a promoter.

a 9. DNA sequence according to claim 6, ~~7 or 8,~~
characterized in that it is contained in an expression vector, such as a plasmid, a cosmid or a virus.

claim 6
a 5 10. DNA sequence according to ~~any of the claims 6 – 9~~,
characterized in that it comprises a traceable label.

11. Micro organism,
claim 6
a characterized in that it includes a DNA sequence according to ~~any of~~
a 10 ~~the claims 6 – 10~~.

12. Micro organism according to claim 11,
characterized in that it is a mammalian cell or a bacterium.

a 15 13. Micro organism according to claim 11 ~~or 12~~,
characterized in that it is an *E. coli* strain.

claim 1
a 14. Method of preparation of an enzyme according to ~~the claims 1-5~~,
characterized in that it is prepared by extraction from naturally
20 occurring sources or by recombinantDNA technology, isolation from a resulting mixture and purification to a desired purity.

claim 1
a 15. Use of an enzyme according to ~~any of the claims 1 – 5~~, in monitoring
an/or controlling a reaction system multiplying DNA sequences, such as a PCR
25 or LCR.

claim 1
a 16. Use of an enzyme according to ~~any of the claims 1 – 5~~ in carry-over
prevention procedures.

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